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| 32692 | 7590 | 02/09/2004 | EXAMINER | |
| 3M INNOVATIVE PROPERTIES COMPANY | | | DEL SOLE, JOSEPH S | |
| PO BOX 33427 | | | ART UNIT | |
| ST. PAUL, MN 55133-3427 | | | PAPER NUMBER | |

1722

DATE MAILED: 02/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/074,930

Applicant(s)

ANGADJIVAND ET AL.

Examiner

Joseph S. Del Sole

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 November 2003 and 02 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

Information Disclosure Statement

1. Although the three patent applications (Serial Nos. 09/415,566, 09/109,497 and 09/478,652) have not been considered per se (because they are not proper as prior art according to MPEP 2128), the three patents issued from this applications (US6,375,886, US6,432,175 and US6,398,847 respectively) have been reviewed and cited in the Notice of References Cited.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 7, 9, 12 and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Sens et al (3,245,767).

Sens et al teach an apparatus having a fiber-forming device capable of producing free-fibers (Fig 1); a spraying mechanism (Fig 1, #30) adapted for spraying a liquid on free-fibers; a collector (Fig 1, #25) positioned to collect free fibers in the form of a nonwoven fibrous web; a drying mechanism (Fig 1, #29) positioned to actively dry the nonwoven fibrous web; the fiber-forming device is an extruder (Fig 1, #2); an apparatus for producing a high-velocity gaseous stream (Fig 1, #22 or #31) that is capable of directing the stream of free-fibers to the collector; the spraying mechanism is configured to spray perpendicular to a stream of free-fibers; the spraying mechanism is configured

to spray an atomizing spray; the fiber forming device is capable of producing melt-blown microfibers; the spraying mechanism is capable of spraying from multiple sides of a stream of free-fibers; the drying mechanism includes a vacuum source and includes a mechanism for mechanically removing liquid.

4. Claims 1-5, 7, 11-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Labino (2,658,848).

Labino teaches an apparatus having a fiber-forming device capable of producing free-fibers (Fig 1); a spraying mechanism (Fig 1, #71a and #71b) adapted for spraying a liquid on free-fibers; a collector (Fig 1, #40 and #41) positioned to collect free fibers in the form of a nonwoven fibrous web; a drying mechanism (Fig 1; #50, #51, #65, #66 and #67) positioned to actively dry the nonwoven fibrous web; the fiber-forming device is an extruder (Fig 1, #10); an apparatus for producing a high-velocity gaseous stream (Fig 1, #24) that is capable of directing the stream of free-fibers to the collector; the spraying mechanism is configured to spray perpendicular to a stream of free-fibers; the spraying mechanism is configured to spray an atomizing spray; the fiber forming device is capable of producing melt-blown microfibers; the drying mechanism includes a heat source; the drying mechanism includes a vacuum source; the drying mechanism includes a stream of a heated drying gas and includes a mechanism for mechanically removing liquid.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Labino (2,658,848) in view of EP0845554A2.

Labino teaches the invention as discussed above including the use of water as the liquid from the spraying mechanism (Fig 1, # 71a and #71b and col 8, lines 60-70).

Labino fails to teach the spraying mechanism capable of spraying at a pressure of about 30kPa to about 3500kPa.

EP0845554A2 teaches spraying water onto a web at a pressure of about 30 kPa to about 3500 kPa (page 3, lines 43-48 and page 5, Table 2) for the purpose of providing filtration enhancing electret charge (page 3, lines 43-48).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the spraying mechanism of Labino with one capable of spraying water at a pressure of about 30kPa to about 3500 kPa as taught by EP0845554A2 because it would enable the providing of an electret charge on the free fibers.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Labino (2,658,848) in view of Weber et al (3,959,421).

Labino teaches the invention as discussed above including the use of water as the liquid from the spraying mechanism (Fig 1, # 71a and #71b and col 8, lines 60-70).

Labino fails to teach the spraying mechanism located less than one foot laterally from the free fiber and less than one-half foot downstream from the fiber-forming device.

Weber et al teach a water spraying mechanism (Fig 1, #20) less than one foot laterally from the free fiber and less than one-half foot downstream from the fiber-forming device (col 3, lines 1-5) for the purpose of achieving maximum cooling (col 3, lines 45-50).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Labino with the spraying mechanism being less than one foot laterally from the free fiber and less than one-half

foot downstream from the fiber-forming device as taught by Weber et al because it enables maximum cooling.

References of Interest

10. Jones et al (6,432,175), Jones et al (6,398,847) and Angadjivand et al. (6,375,886) are cited of interest to show the state of the art.

Response to Arguments

11. Applicant's arguments filed 11/11/03 and 12/2/03 have been fully considered but they are not persuasive.

The Applicant argues that the applications cited on the IDS must be considered.

The Examiner maintains his disagreement, for reasons stated in the previous Office action. However, the Examiner has now reviewed and placed on record the three patents issued from the cited patent applications.

The Examiner has removed the objections to claims 15 and 16. The scopes set forth within claims 15 and 16 due to the transitional phrases "consists essentially of" and "composed of" are limited by the discussions of transitional phrases at section 2111.03 of the MPEP and the Applicant's discussion on page 7 of the original specification. The rejections of claims 15 and 16 are maintained as set forth above.

The Applicant argues that Sens does not disclose a spraying mechanism that is adapted for and is positioned to spray a polar liquid on the free fibers, but rather that Sens sprays a suitable binder.

While the Examiner agrees that Sens may not teach a process of using the spraying apparatus that sprays a polar liquid (such as water), the spraying apparatus of

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Sens is adapted to spray a polar liquid. A spraying apparatus that sprays a liquid is adapted to spray any liquid whether it is polar or not. The Applicant's specification does not discuss structures that specifically enable the spraying apparatus to spray polar liquid and further does not claim such structures that otherwise are not taught by Sens.

The Applicant argues that Sens does not disclose an active drying apparatus.

The Examiner disagrees. The steam blower is separated from the suction box and duct and therefore the suction box and duct do serve to decrease the wetness of the web after the steam is blown on the fibers.

The Applicant argues that Labino does not disclose a spraying mechanism that is positioned to spray a polar liquid on free fibers.

The Examiner disagrees. First of all, Labino states that the spray heads are used "as they (the fibers) are deposited on the wire fabric belts". Therefore, as the fibers are being deposited they are still free fibers. Second of all, the existence of the sprayers shows that Labino anticipates the claimed structural invention; the position of a feature does not change the structure of an invention, rather positioning is a process limitation that does not further limit a structural claim.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Joseph S. Del Sole whose telephone number is (571) 272-1130. The examiner can normally be reached on Monday through Friday from 8:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Wanda Walker, can be reached at (571) 272-1151. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for both non-after finals and for after finals.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Joseph S. Del Sole

J.S.D.

January 29, 2004



ROBERT DAVIS
PRIMARY EXAMINER
GROUP 1300-1700

2/2/04